



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,761

03/07/2005

Antti Tolli

088245-0120

5829

23524 7590 09/15/2010

FOLEY & LARDNER LLP  
150 EAST GILMAN STREET  
P.O. BOX 1497  
MADISON, WI 53701-1497

EXAMINER

HUYNH, NAM TRUNG

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

09/15/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,761	<b>Applicant(s)</b> TOLLI ET AL.	
	<b>Examiner</b> NAM HUYNH	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17, 35-38, 46, 47 and 58-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 35-38, 46, 47 and 58-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/4/10 has been entered.

### ***Response to Amendment***

This office action is in response to amendment filed on 5/4/10. Claims 1, 58, 61, 64, and 66 have been amended.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 2617

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1-17, 36-38, 46, 58, 61, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halonen et al. (US 7,542,779) in view of Arimitsu (US 2001/0009853), and further in view of Willars (US 6,597,679).

Regarding claim 1, Halonen teaches a method comprising:

providing a list (new list) of a plurality of radio access means (candidates) in a communications system to a network element (distributed handover control entity (RNC, BSC, LLRCC)) of the communications system, said list based on a plurality of parameters associated with each of the plurality of radio access means for serving a mobile station (list is based on measurements taken by mobile station), and further wherein the plurality of radio access means use different communication systems (handover candidates may belong to other communication systems such as GSM, UTRAN, or IP RAN);

creating a prioritized ordering of the radio access means based on said list information (CRRM prioritizes candidates and returns new list to distributed handover control entity);

selecting a target radio access means of the plurality of radio access means based on the created prioritized ordering (CRRM may select a target based on its own algorithms and information) (column 9, lines 10-53; figure 1).

However, Halonen does not explicitly teach that the candidates are radio access means that contain a plurality of cells. Arimitsu discloses a method for a mobile terminal to select a network system (abstract). Arimitsu teaches assigning priorities to network systems (radio access means comprising a plurality of cells) based on measured signal strength (paragraphs 44-46). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Halonen to allow the CRRM to prioritize network system candidates, as taught by Arimitsu, in order to switch from an existing network to a candidate network when the existing network can not sufficiently serve the mobile terminal.

The combination of Halonen and Arimitsu does not explicitly teach sending a request to the mobile station to perform compressed mode measurements at the mobile station based on the selected target radio access means, said measurements for selecting a cell associated with the selected target radio access means, and wherein said compressed mode measurements include decoding of a parameter associated with a the cell. Willars discloses control of compressed mode transmission in WCDMA (title). Willars teaches that when a mobile station is within a hierarchical system and approaches a base station of a WCDMA/CDMA base station, it receives an order from the network to perform compressed mode measurements from an indicated base station (column 8, lines 14-62) (mobile station decodes a parameter associated with the cell when it determines which base station the order is instructing it to take measurements from). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Halonen and

Arimitsu to allow the target distributed handover entity to order the mobile station to make compressed mode measurements on associated cells, as taught by Willars, when the CRRM determines that handover to a WCDMA/CDMA network is proper.

Compressed mode measurements are known to be used in CDMA networks to allow the mobile station to measure on one channel while continuously receiving on another.

Regarding claim 2, Halonen teaches the selection is for handover of the mobile station from a first radio access means to a second radio access means (column 7, lines 1-55).

Regarding claim 3, Halonen teaches the first radio access means operates at a first frequency of a radio access technology and the second radio access means operates at a second frequency of said radio access technology (column 7, lines 1-55).

Regarding claims 4 and 7, Halonen teaches the radio access technology is code division multiple access (column 7, lines 1-55).

Regarding claims 5 and 8, Halonen teaches the radio access technology is wideband code division multiple access (column 7, lines 1-55).

Regarding claim 6, Willars teaches the first radio access means operates in accordance with a first radio access technology, and the second radio access means operates in accordance with a second, different, radio access technology (column 7, lines 1-55).

Regarding claim 9, Willars teaches the second radio access means comprises a second plurality of cells (WCDMA network), and the compressed mode measurements

Art Unit: 2617

comprise signal strength measurements of at least one of said second plurality of cells (column 6, lines 56-67).

Regarding claim 10, Willars teaches the second radio access means comprises a second plurality of cells, and the compressed mode measurements comprise signal strength measurements of at least one of said second plurality of cells (column 6, lines 56-67), and wherein the compressed mode measurements comprise decoding a parameter associated with at least one of the second plurality of cells (column 8, lines 56-67; column 9, lines 1-2; measurement order indicates which base station to take measurements on).

Regarding claim 11, Willars teaches the parameter is the base station identification code associated with one of the plurality of cells (column 8, lines 56-67; column 9, lines 1-2; mobile station knows the identity of base station it's taking measurements on).

Regarding claim 12, Willars teaches the plurality of parameters further comprises at least one of the following: a real time load, a non real time load, or a signal to interference ratio (column 2, lines 25-35).

Regarding claim 13, Halonen teaches the list (candidate new list) comprises a weighting value (priority) (column 9, lines 10-53).

Regarding claim 14, Halonen teaches the plurality of parameters comprise the service priority weight is associated with a suitability of the radio access means in providing a service requested by the mobile station (column 9, lines 22-31).

Regarding claim 15, Halonen teaches the network element is a radio network controller (column 9, lines 10-53).

Regarding claim 16, Halonen teaches the list is provided by a common resource radio management (column 9, lines 10-53).

Regarding claim 17, Halonen teaches the common resource radio management component is a common radio management server (column 9, lines 10-53).

Regarding claim 36, the combination of Halonen, Arimitsu, and Willars teaches selected target radio access means (Halonen; column 9, lines 10-53) comprises a second plurality of cells (Arimitsu; paragraphs 44-46), and Willars teaches the compressed mode measurements comprise signal strength measurements of at least one cell of the second plurality of cells (column 6, lines 56-67), the method further comprising selecting a handover cell of the second plurality of cells based on a highest signal strength measurement (column 2, lines 25-46).

Regarding claim 37, Halonen teaches ordering the radio access means is further based on a type of service requested (quality of service parameter required by UE) by the mobile station (column 9, lines 10-53).

Regarding claim 38, Halonen teaches the plurality of parameters comprise a service priority weight (classmark information) that is associated with each of the radio access means and that comprises a suitability of a selected radio access means in providing a service requested by the mobile station (column 9, lines 10-53).



Regarding claim 46, Willars teaches triggering a handover of the mobile station to the cell selected based on the compressed mode measurements at the mobile station (column 8, lines 14-32).

Regarding claims 58, 61, and 64, the limitations are rejected as applied to claim 1.

5. Claims 35, 47, 59, 60, 62, 63, 65, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halonen et al. (US 7,542,779) in view of Arimitsu (US 2001/0009853), and further in view of Willars (US 6,597,679) as applied to claims 1, 58, 61, and 64 above, and further in view of Lemson (US 5,655,217).

Regarding claim 35, In the combination of Halonen, Arimitsu, and Willars teaches the limitations set forth in claims 1, 58, 61, and 64, and Willars teaches that a mobile station sends a compressed mode request to the network base on a measurement order (column 8, lines 14-32), but does not explicitly teach:

determining if performing the compressed mode measurements at the mobile station is successful;

if performing the compressed mode measurements is unsuccessful, selecting a second target radio access means of the plurality of radio access means based on the ordering; and

performing second compressed mode measurements at the mobile station based on the second selected target radio access means, said second measurements for selecting a second cell associated with the selected second target radio access means.

Lemson teaches handover procedure comprising determining if measurement data comprises an excessively high signal level and/or noise bursts. In this condition, the measurements are repeated (figure 5 and column 17, lines 29-59). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Halonen, Arimitsu, and Willars to include verification of measurements, as taught by Lemson, in order to reduce the potential for spurious responses and increase measurement accuracy.

Regarding claims 47, it is further obvious that when the mobile station detects a spurious measurement, as taught by Lemson, it can send another request for another cell to measure since the network has to prepare the transmission slot for compressed mode measurements.

Regarding claims 59, 62, and 65, the limitations are rejected as applied to claim 35.

Regarding claims 60, 63, and 66, the limitations are rejected as applied to claim 47.

### ***Response to Arguments***

6. Applicant's arguments filed 5/4/10 have been fully considered but they are not persuasive.

Regarding independent claims 1, 58, 61, and 64, Applicant submits that the combination of Halonen, Arimitsu, and Willars does not teach "said compressed mode measurements include decoding of a parameter associated with the cell". The

Art Unit: 2617

Examiner respectfully disagrees and submits that this limitation is taught by Willars. In the invention of Willars, when a mobile station being serviced by base station 53 (a first serving base station), approaches a geographical boundary serviced by base station 54 (a second target base station), it receives an order to take a measurement from base station 54 (column 8, lines 14-27). It is evident from this teaching that the measurement order contains the base station, or identity of the base station, for which the network is commanding the mobile station to take measurements from because the network directly orders the mobile to take measurements from base station 54. Thus in fulfilling the order, the mobile station must determine, or decode, the identity of the base station, or parameter associated with the cell, to take measurements from in order to fulfill the order. Accordingly for these reasons and the reasons set forth above, the grounds of rejection have been maintained from the previous office action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/  
Supervisory Patent Examiner, Art Unit 2617

/Nam Huynh/  
Examiner, Art Unit 2617